Compliance Deadline for RMP Rule Approaches: With One Year to Comply, DOE Facilities Have a Lot to Do

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June 21, 1999, is the compliance deadline for all requirements of the U.S. Environmental Protection Agency (EPA) rule 40 CFR Part 68, "Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)(7)," the RMP rule. Promulgated by EPA in June 1966, the RMP rule applies to all facilities that have more than a threshold quantity (TQ) of a regulated substance, as listed in the rule.

Background

The Clean Air Act Amendments of 1990 directed both the Occupational Safety and Health Administration (OSHA) and EPA to promulgate rules to prevent accidental release of hazardous substances to the air, and to mitigate the consequences of releases through preventive measures for those substances posing the greatest risks.

In February 1992, OSHA responded with its final rule, 29 CFR 1910.119, "Process Safety Management of Highly Hazardous Chemicals," the PSM rule, which also contains a list of regulated substances and TQs, above which a process is subject to the rule. Deadline for compliance with all requirements of the PSM rule was May 26, 1997.

In January 1994, EPA finalized a list of 77 toxic and 63 flammable substances that would be subject to its rule. However, the final EPA rule for risk management systems for prevention of accidental releases was not finalized until June 1996. Subsequent to finalization, a three-year compliance implementation period began. That period ends on June 21, 1999, when all facilities that are subject to the rule are expected to be in full compliance.

Penalties for non-compliance are stiff--up to $25,000 per day (per violation) for facilities or individuals who violate the regulation. In addition, EPA or state agencies with authority to enforce RMP requirements can inspect facilities without prior notification.

Requirements of the RMP Rule

The requirements of the RMP rule, with which all regulated facilities must comply, are the basic components of a risk management program:

- A hazards assessment program to identify and analyze the potential onsite and offsite consequences (impacts) of worst-case and alternative accidental releases of regulated substances. The hazards assessment must also document any accidents involving regulated (listed) substances that occurred within the 5 years of the assessment.

- A accident prevention program, with components very similar to those required under the OSHA PSM rule, to integrate technology, procedures, and management practices for handling regulated substances

- An emergency response program, coordinated with local emergency planning and response organizations, to mitigate accidental releases that occur

In addition, to implement a risk management program, a management system is required to integrate the components; to define, describe, and document policies, procedures, protective measures, training, and verification; and to assign responsibilities and specify approvals.

Comparison with the OSHA PSM Rule

The RMP rule is similar to OSHA's PSM rule in that it is performance based. That is, it sets minimum requirements for regulated facilities to use in developing risk management programs, but it does not prescribe specific methods to accomplish compliance.

However, the RMP rule is also different from and, in many ways, goes beyond the PSM rule. First, some facilities not covered by the PSM rule may be covered by RMP. In addition, because compliance with the RMP rule requires additional effort, even facilities already in compliance with the PSM rule may have much to do.

Differences in Regulated Substances

The PSM rule regulates 137 specific toxic and reactive (highly hazardous chemical) substances listed individually, with respective TQs, in Appendix A of the rule. Except as noted in the list, the rule regulates pure substances only, not mixtures. In addition, the rule regulates all flammables (liquids, gases, and mixtures of liquid and gas) kept in 10,000-pound quantities or more, except as noted in the rule. Finally, the rule regulates any quantity of an explosive highly hazardous chemical in a manufacturing process.

The RMP rule regulates only 77 toxic substances. However, except where specific cutoffs concentrations are listed, these substances are regulated even as mixtures, if the substance exceeds 1 weight percent of the mixture and if the partial pressure of the substance is equal to or greater than 10mm Hg.

The RMP rule also regulates 63 flammable substances specifically listed in the rule. In addition, the entire weight of a mixture must be considered if a regulated flammable exceeds 1 weight percent of the mixture, unless it can be documented that the mixture has a flashpoint above 73◦F and a boiling point above 100◦F.

Explosives manufacture is not regulated under RMP. In addition, the RMP rule does not cover loading and unloading of transportation containers, if the containers are under active shipping papers.

Hazard Assessment Program

The PSM rule requires that process hazards analyses be performed for all processes containing TQs of substances regulated under the rule. These hazards analyses must include a qualitative range of possible safety and health effects on employees in the workplace caused by failure of engineering and administrative controls.

The RMP rule requires a facility to analyze potential onsite and offsite consequences (impacts) of accidental releases of regulated substances. Even the minimum hazard assessment program under RMP requires a consequence analysis that identifies the worst-case release scenario for each regulated chemical as well as documentation of the facility's 5-year accident history.

Emergency Response Program

The PSM rule requires an emergency response plan that specifies evacuation routes, safe zones, and alarms; that includes accident and incident reporting; that specifies actions to stop releases; and that includes preplanning for incidental releases, according to 29 CFR 1910.38(a). In addition, the plan must include procedures for handling small releases.

At a minimum, the RMP rule requires that an emergency response plan, such as that for PSM, be in place and that emergency response procedures be coordinated with local (external) emergency planning and response organizations.

Tiered Approach to Regulation

While OSHA applies the PSM rule, in full, to all facilities subject to regulation under the rule, in its final rule, EPA adopted a 3-tiered, risk-based approach for regulating facilities that are subject to the RMP rule. That is, under RMP, facilities that present higher risk to offsite populations and the environment must comply with more stringent requirements that those that present lower offsite risks.

The three tiers of regulation under RMP are defined by EPA as program levels, and apply to individual listed substances and the processes with which they are associated, rather than to entire facilities. Thus, if a single facility contains several regulated substances, it may be subject to different program levels for each.

Requirements for hazard assessments, prevention programs, emergency response plans, risk management plan contents, and risk management systems vary according to program level.

Disclosure

Unlike the PSM rule, the RMP rule requires that facilities subject to the rule disclose to state and local governments, and to the community at large, information about their assessment of the potential catastrophic consequences to the surrounding community and environment from accidents at their facilities. Facilities must also disclose information about their accident

prevention and emergency response programs as well.

Disclosure is in the form of a risk management plan that summarizes these programs and the activities associated with them to minimize the likelihood and consequences of accidental releases.

Implementation

To implement RMP, a management system is needed which is flexible enough to accommodate different levels of responsibilities, depending upon the size and/or complexity of the regulated facility. EPA recommends developing an overall management system as one of the four steps to implementing RMP:

- Conduct a baseline audit or gap analysis of the existing management system. Determine what system components and practices are in place that meet the requirements of the rule, and what more are needed.

- Develop an implementation plan. Address both specific compliance requirements and needed management systems components. Address long-term maintenance of RMP compliance.

- Develop and implement a (multi-level) management system, including practices that govern the way work is conducted.

- Maintain the program. Maintain compliance.

For facilities already in compliance with OSHA's PSM rule, implementing a risk management program will be easier, because a prevention program, and the management system needed to implement it, will already be in place.

Summary

EPA's RMP rule, 40 CFR Part 68, is a performance-based regulation applicable to all facilities that maintain threshold quantities of highly hazardous substances, as listed in the rule. It contains two basic requirements:

- Development and implementation of a risk management program
- Documentation and submission of a risk management plan that summarizes information about the program.

The rule requires regulated facilities to maintain a hazards assessment program, an accident prevention program, and an emergency response program, and entails the implementation of a management system to integrate these components.

Full compliance with the RMP rule is required by June 21, 1999.